

Calendar No. 691

**106th Congress }
2d Session }**

SENATE

**{ REPORT
{ 106-349**

**ELECTRONIC COMMERCE TECHNOLOGY
PROMOTION ACT**

R E P O R T

OF THE

**COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION**

on

S. 1912



JULY 19, 2000.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED SIXTH CONGRESS

SECOND SESSION

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(II)

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ELECTRONIC COMMERCE TECHNOLOGY PROMOTION ACT

JULY 19, 2000.—Ordered to be printed

Mr. MCCAIN, from the Committee on Commerce, Science, and
Transportation, submitted the following

REPORT

[To accompany S. 1912]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 1912) “A bill to facilitate the growth of electronic commerce and enable the electronic commerce market to continue its current growth rate and realize its full potential, to signal strong support of the electronic commerce market by promoting its use within Federal Government agencies and small- and medium-sized businesses, and for other purposes”, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

PURPOSE OF THE BILL

The major provisions of the bill, S. 1912, would establish a Center of Excellence in Electronic Commerce at the National Institute of Standards and Technology (NIST). The Center would—

- (1) act as the centralized resource of information for Federal agencies in electronic commerce (e-commerce) technologies and issues;
- (2) provide guidance to the Office of Management and Budget in developing policies pertaining to e-commerce;
- (3) promote the use of e-commerce technologies within Federal agencies and small- and medium-sized businesses; and
- (4) ensure that the interests of the United States government are appropriately represented at both domestic and international meetings of formal standards organizations, industry consortia, and other bodies that define interoperability specifications for e-commerce technologies.

The NIST Center of Excellence would be established as a matrix organization that will coordinate existing and future activities at

the Institute on Electronic Commerce using existing resources. Its activities would include relevant reference implementations for Federal agencies and would provide technical assistance to small- and medium-sized businesses.

BACKGROUND AND NEEDS

E-commerce can be broadly defined as the use of non-proprietary electronic communications—like the Internet and its World Wide Web (Web)—for transactions such as the purchase of goods and services electronically. E-commerce has been widely embraced, both as a means for operational cost reduction, as well as an additional marketing channel with high potential for increased customer reach. According to reports from market research firms, the amount of commerce conducted over the Web may reach a staggering \$6.9 trillion by 2004. North America will account for \$3.5 trillion of that worldwide amount. It is expected that by 2004, the United States will continue to maintain its position as the world e-commerce leader. The number of users who make purchases over the Web will jump from 31 million in 1998 to more than 183 million in 2003, a figure which will still represent only 36 percent of all Web users.

Although e-commerce is popularly thought of as Web sites that allow potential customers to browse for product information and purchase products on-line, this application is neither the major market segment for e-commerce software applications nor the main reason for the tremendous growth in the e-commerce market. In industry parlance, these applications are referred to as “consumer-to-business” (or “storefront”) applications. However, the “business-to-business” (or “B2B”) applications segment is where e-commerce is consistently experiencing its fastest growth. These applications include procurement, order management, and supply chain integration which are expected to account for \$8.5 billion of the estimated \$13.1 billion overall e-commerce applications market in 2003. Another rapidly growing market segment involves customer service and support applications. Overall, the worldwide customer service and support applications market grew 154 percent in 1998 to \$444 million, was expected to grow 280 percent in 1999 to \$1.7 billion, and is projected to jump to \$13.1 billion in 2003.

B2B is an important application and depends on the ability to establish connections between two previously non-corresponding companies. Without this capability, new customers cannot be generated. There are many customers whose requirements are characterized by a need to communicate across multiple organizational layers without a common service provider. An example of this is the automobile industry which requires manufacturers and part suppliers to communicate with each other absent a single network provider.

The ubiquitous nature of the Internet and the Web means that e-commerce applications and services are inherently global, unless regulated to be otherwise. By year end, almost 60 percent of the world's online population will reside outside of the United States, and non-United States Internet commerce will explode from 26 percent of worldwide e-commerce spending in 1998 to 46 percent by 2003. According to market research firms, e-commerce activity in Western Europe is expanding rapidly, with spending expected to

increase at a compound annual growth rate of 138 percent, to \$1.5 trillion by 2004, led by aggressive efforts of industry and growth of online businesses. The Asia-Pacific region is expected to experience significant growth by 2004, when technology exports and national commitments to online trade will drive \$1.6 trillion, or more than 8 percent of all online sales. Falling trade barriers will create opportunities for increased e-commerce activity. By 2003, it is estimated that 65 percent of Web users will be international, and non-United States countries will account for just less than half of worldwide Internet commerce.

A primary driver in the growth of e-commerce is its promise of increased efficiency in business transactions—the ability to conduct business cheaper and faster. However, the full potential of e-commerce can only be realized if these transactions can occur seamlessly, with no barriers and borders. Interoperability and standardization plays an important role in lowering costs and prices, increasing competitiveness, and improving the benefits to the consumer. Interoperability allows users to substitute one product with another which has been manufactured by a different company. This allows for competition among manufacturers in the replacement market. In the digital economy, interoperability plays an even greater role where interactions and exchanges between businesses and customers occur constantly, in real time, and increases at each subsequent stage of the business cycle.

LEGISLATIVE HISTORY

On October 28, 1999, the Subcommittee on Science, Technology, and Space held an oversight hearing on the Role of Standards in the Growth of Electronic Commerce at which time testimony was heard from the Honorable Andrew J. Pincus, General Counsel, United States Department of Commerce; Professor Andrew B. Whinston, Director, Center for Research in Electronic Commerce, University of Texas at Austin; Mr. Randy Whiting, President and CEO, CommerceNet; Mr. Glenn Habern, Senior Vice President, New Business Development, Wal-Mart Stores, Inc.; and Mr. Dan Schutzer, Chairman, the Financial Services Technology Consortium, Citigroup.

On November 10, 1999, Senator Frist, Chairman of the Subcommittee, introduced S. 1912, a bill to facilitate the growth of electronic commerce and enable the electronic commerce market to continue its current growth rate and realize its full potential.

On April 13, 2000, the Committee met in executive session and, on a voice vote, ordered the bill to be reported, without amendment.

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, May 11, 2000.

Hon. JOHN MCCAIN,
Chairman, Committee on Commerce, Science, and Transportation,
U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 1912, the Electronic Commerce Technology Promotion Act.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Mark Hadley.

Sincerely,

BARRY B. ANDERSON
(For Dan L. Crippen, Director).

Enclosure.

S. 1912—Electronic Commerce Technology Promotion Act

Summary: S. 1912 would establish the Center of Excellence for Electronic Commerce within the National Institute of Standards and Technology (NIST). The bill would require the center to develop guidelines and standards for federal agencies' use of electronic commerce technologies, and to provide technical assistance to small and medium-size businesses on issues related to electronic commerce. The bill also would require the center to lead an inter-agency working group to promote the use of electronic commerce.

Based on information from NIST, CBO estimates implementing S. 1912 would cost \$123 million over the 2002–2005 period. Because S. 1912 would not affect direct spending or receipts, pay-as-you-go procedures would not apply. S. 1912 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would not affect the budgets of state, local, or tribal governments.

Estimated cost to the Federal Government: For the purposes of this estimate, CBO assumes S. 1912 will be enacted near the start of fiscal year 2001, and that outlays will follow historical spending patterns of similar programs. The estimated budgetary impact of S. 1912 is shown in the following table. The costs of this legislation fall within budget function 370 (commerce and housing credit).

	By fiscal year in millions of dollars—				
	2001	2002	2003	2004	2005
CHANGES IN SPENDING SUBJECT TO APPROPRIATION					
Estimated Authorization Level	27	24	24	24	24
Estimated Outlays	24	27	24	24	24

Basis of estimate: Based on information from NIST, CBO estimates that the new center that would be established by this bill would spend about \$9 million to establish guidelines and standards for the use of electronic commerce technologies by federal agencies in 2001, and about \$6 million to update these standards in each subsequent year.

S. 1912 would require the new center to work with the Small Business Administration (SBA) to provide technical assistance to small and medium-sized businesses on issues related to electronic

commerce. Based on information from NIST and the costs of SBA's technical assistance programs, CBO estimates that implementing this provision would cost about \$15 million annually.

S. 1912 would require the center to lead an interagency working group to promote the use of electronic commerce. Based on information from NIST, CBO estimates this effort would cost about \$3 million a year over the 2001–2005 period.

Pay-As-you-go considerations: None.

Intergovernmental and private-sector impact: S. 1912 contains no intergovernmental or private-sector mandates as defined in UMR and would not affect the budgets of state, local, or tribal governments.

Estimate prepared by: Federal Costs: Mark Hadley, Impact on State, Local, and Tribal Governments: Shelley Finlayson. Impact on the Private Sector: Jean Wooster.

Estimate approved by: Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

NUMBER OF PERSONS COVERED

S. 1912, as reported, would facilitate the growth of e-commerce through the coordination of activities at NIST. NIST is a non-regulatory agency which conducts measurements and standards activities in support of United States industry and manages technology grant and assistance programs to increase United States competitiveness. The Committee believes that the bill will not subject any individuals or businesses affected by the bill to any additional regulation.

ECONOMIC IMPACT

The establishment of a Center of Excellence for Electronic Commerce would allow NIST to continue its support of other Federal agencies and United States industries. NIST's e-commerce programs would continue to assist United States businesses to be more competitive in international markets and would continue to benefit the general public through contributing to the economic growth of the country from investments in new technologies.

PRIVACY

This legislation would not have an adverse impact on the privacy of individuals.

PAPERWORK

This legislation would not increase the paperwork requirement for private individuals or businesses. The legislation would require two reports to be submitted to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Science: (1) the Under Secretary of Commerce for Technology would be required to submit a report on certain issues in e-commerce and (2) the Director of NIST would be required to submit a report on

the costs and benefits of the deployment of e-commerce technologies in Federal agencies.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title

This section would permit the bill to be cited as the “Electronic Commerce Technology Promotion Act”.

Section 2. Findings

This section of the reported bill would make findings pertaining to the growth of e-commerce by the year 2003; essential elements for sustained growth in e-commerce; the role of the Federal government to facilitate the growth of e-commerce; enablers of global e-commerce; adoption and deployment of relevant technologies and systems; usage of technologies by the government; strengthening United States leadership in e-commerce; and the role of small- and medium-sized businesses to enhance the gross domestic product.

Section 3. Definitions

This section would provide the definitions of several key terms used throughout the reported bill.

Section 4. Purposes

This section would identify the purposes of the reported bill as follows:

- (1) to enable the e-commerce market to continue its current growth rate and realize its full potential by supporting the development of relevant standards and interoperability specifications;
- (2) to signal strong support of the e-commerce market by promoting the use of e-commerce technologies within Federal government agencies; and
- (3) to establish a Center of Excellence in Electronic Commerce at the NIST, which will act as a central resource for the Federal government, promote the use of e-commerce technologies, and represent the government interest in private sector collaborative efforts to develop e-commerce technologies and interoperability specifications.

Section 5. Center of Excellence for Electronic Commerce

Subsection (a) would require the Director of NIST to establish a Center of Excellence for Electronic Commerce. The Center would be required to be organized as a matrix organization.

Subsection (b) would describe the functions of the Center. These functions would include acting as a central source of information for Federal agencies in electronic commerce technologies and issues; providing guidance to the Office of Management and Budget; promoting the use of e-commerce within both Federal agencies and small- and medium-sized businesses; and ensuring representation of the United States government at both domestic and international meetings pertaining to the setting of interoperability specifications for electronic commerce technologies.

In support of subsection (b), subsection (c) would describe the activities of the Center. The stated activities would require the Cen-

ter to identify and coordinate all the relevant activities at NIST, coordinate and lead an interagency working group, develop system guidelines and reference implementations for use by other agencies, advise the Secretary of Commerce of any abusive use of standards as barriers to trade, and lead an effort with the Manufacturing Extension Partnership at NIST to provide technical assistance to small- and medium-sized businesses on e-commerce technology issues.

Section 6. Reports

This section of the reported bill would require two reports to be submitted to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science of the House of Representatives. One report would be required from the Under Secretary of Technology at the Department of Commerce, within six months of enactment, and the other would be required from the Director of NIST, within one year after enactment.

The report from the Under Secretary would address the following issues:

- (1) NIST's current efforts and activities on e-commerce;
- (2) the current status of deployment of e-commerce technologies in the Federal agencies, including any future plans;
- (3) issues Federal agencies are expected to encounter in widespread deployment of e-commerce technologies; and
- (4) any legislative revisions to existing Federal programs necessary to support the advancement of e-commerce in both the Federal government and industry.

The Director's report would present, in collaboration with the inter-agency working group referred to in section 5, the plan, proposed schedule, and associated costs and benefits for the deployment of e-commerce technologies in the Federal agencies.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee states that the bill as reported would make no change to existing law.